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ABSTRACT

Based on the premise that thousands of disabled do not participate in vocational education mainly because of nonacceptance into programs due to a lack of readiness, a study was conducted focusing on three severely disabled groups: (1) those accepted by the Department of Rehabilitation for programs, (2) those not accepted but given "pre-vocational" services, and (3) those not accepted and receiving no services. It was hypothesized that more could be helped with more readily available services; that "pre-vocational" services would increase self-esteem and vocational satisfaction; and that the group previously rejected would gain the same level of self-esteem, overall adjustment, etc., as the group chosen for participation in vocational education programs once they had "pre-vocational" services. A pretest-posttest controlled comparison study utilizing a treatment/no treatment randomized design with matched samples was conducted on one experimental group (39 subjects) and two comparison groups (29 and 33 subjects). A number of services (personal and family counseling, work adjustment, skill evaluation, work experience, independent living experience) were given the experimental group. Results indicated significant attainment of vocational education and employment objectives by the experimental group. There was no significant difference on psychological measures between pre- and posttesting across groups; however, regression analysis proved several psychological variables significant in predicting employment. (FP)

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**The Effects of Providing Pre-Vocational
Services to Handicapped Young Adults
to Increase Their Readiness for
Vocational Education and Training
Programs: A Controlled Demonstration**

Final Report

to

**California State Department of Education
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SUMMARY OF PROJECT FINDINGS

California has tens of thousands of disabled individuals not taking part in existing vocational education programs who could profit from these experiences. Many of these people are in need of "pre-educational" or "pre-vocational" services to enhance their readiness for training or educational programs. These individuals have usually not been accepted for services by the Department of Rehabilitation due to their lack of vocational readiness. The purpose of this investigation was to demonstrate the value of pre-vocational services for this population and to document the degree of vocational and educational success that could be attained by providing these services.

Three groups of severely disabled individuals were included in a study designed to demonstrate the benefits of pre-educational/pre-vocational experiences vis a' vis subsequent utilization and effect of available vocational education programs. This study is notable in that subjects receiving the experimental "treatment" had been rejected for services by the Department of Rehabilitation. Historically, such individuals are not likely to utilize vocational education opportunities, even when available.

For comparison purposes, three groups were studied: 1) a group of individuals already accepted by the Department of Rehabilitation and hence being sponsored in vocational education or training programs; 2) a group of individuals not accepted by the Department of Rehabilitation but given "pre-vocational" services; 3) a group not accepted by the Department of

Rehabilitation and not given "pre-vocational" services. All three groups were given pre-project and post-project questionnaires to assess overall adjustment, attitudes toward disability, self-satisfaction and career satisfaction.

The individuals in the experimental group received a multiplicity of services, including personal counseling, family counseling, vocational counseling, work adjustment, skill evaluation, work experience, independent living experience and community service. All of the individuals in this group were severely disabled.

The results indicated significant attainment of vocational education and employment objectives by the "pre-vocational" group. At study's end, six of 31 persons were employed, nine had been enrolled in vocational education or training programs, eleven were accepted by the Department of Rehabilitation and thirteen had been in at least some community college programs. A total of 120 units of community college credit had been taken by the individuals in the experimental group. This compared favorably with the number of people employed or in vocational education or training programs in the originally accepted group. Some individuals in the no-service control group were also employed but generally in a limited way.

If the results of this study are extrapolated to the population of non-served adults in California, it is estimated that approximately 70,000 additional people initially not accepted by the Department of Rehabilitation could profit from programs similar to this. Of these

individuals, approximately 30,000 could become employed. Approximately 535,000 college units would be taken by these individuals to aid them in their vocational or personal development.

None of the psychological measures administered before and after the project showed differences between pre-testing and post-testing across the groups. However, when regression analyses were conducted using the psychological measures as independent variables and either employment or acceptance by the Department of Rehabilitation after the program as criteria, several variables proved significant. In predicting employment, pre-project measures of attitudes toward disability, overall adjustment and self-congruency combined to account for 24 percent of the variance. None of the post-project measures or difference scores were significant predictors of ultimate employment. In predicting acceptance by the Department of Rehabilitation, 46 percent of the variance could be accounted for by overall adjustment, attitudes toward disability, self-congruency and career satisfaction. Of the latter three variables, it was higher scores which were correlated with acceptance. Overall better adjustment was also correlated with acceptance. The regression analyses supported one another. The pre-project measures for the employed subjects were similar to the post-project scores for the experimental group. It appears that persons already prepared for maximum utilization of employment services had common patterns on overall adjustment, attitudes and self-concept. The experimental program appeared to help those individuals not already so prepared, to show significant improvement in these areas.

The following implications can be drawn from the study:

1. Many more severely disabled people will utilize and can profit from vocational education and training programs.
2. Success with this group requires a great deal of "pre-vocational" and supportive input.
3. Personal counseling plays a large role in ultimate success.
4. Community colleges can play a large role in supplying remedial education and basic vocational classes on an open enrollment basis.
5. Work experience or work-study programs are invaluable to vocational success with this population.
6. Short-term vocational programs appear to work well with this population. Long-term vocational programs (two years or more) are not necessarily required.

THE EFFECTS OF PROVIDING PRE-VOCATIONAL SERVICES TO HANDICAPPED YOUNG
ADULTS TO INCREASE THEIR READINESS FOR VOCATIONAL EDUCATION PROGRAMS:
A CONTROLLED DEMONSTRATION

BACKGROUND

California has thousands of handicapped persons who could profit from existing vocational education programs at the community college level, but who are not able to take advantage of the system. According to some sources (e.g., Department of Rehabilitation, 1969), as few as 20 percent of those individuals who could take advantage of the existing programs actually do so.

Many factors have contributed to this situation. First, historically, the agency which is charged with responsibility of aiding the vocational development of handicapped persons, the State Department of Rehabilitation, has not successfully dealt with many severely handicapped persons. It has been the most severely disabled who have not been served by the Department of Rehabilitation. By some estimates, as many as 70 percent of referred applicants have been rejected for service by the Department (source: The Hidden Minority. State Department of Rehabilitation, 1969). There are approximately 436,000 disabled individuals in California. (Source: The Hidden Minority, p. 11, 12). Therefore, somewhere between

The investigators are indebted to the following individuals who contributed substantially to the completion of the project: Gwen Gardner, research assistant, Michael Wada, research assistant, Zo Harris, research assistant, Jeri Ewin, Work Experience Coordinator, and to Elizabeth Gewin and De Ann Lucas for their fine clerical assistance.

200,000 and 300,000 individuals are not receiving vocational assistance. This represents a very sizable group of individuals who have not been assisted before.

The Department of Rehabilitation has recently changed its priorities to serve the most severely disabled first, but the Department has little history in this area on which to draw in order to develop the necessary programs. The apparent lack of experience by counselors in the Department of Rehabilitation and by staff in the community colleges leaves many of these professionals feeling that they don't know what is needed to move more disabled individuals into vocational education programs or how to arrange the necessary experiences that would make it successful.

Often, the kind of experiences and programs that are needed to move more disabled individuals into and through vocational education and training programs are "pre-vocational" in nature and/or are aimed at creating greater personal and social independence. The needs for personal counseling, work exploration counseling, work experience, assistance in transportation problems, social and family problems, financial counseling, or the need for remedial education have often prevented many handicapped persons from entering into vocational education programs. This is especially true for the most severely disabled individuals where these "pre-vocational" considerations are most important. It is not surprising to find "low interest" or "low achievement motivation" for a vocational education program in a person who has questions about his/her own self-worth, whose family rejects him, who has never worked or experienced school outside a segregated "special" setting or who

has problems of transportation, housing or finances.

The Department of Rehabilitation has done a good job with the individuals it has accepted for service. However, these individuals have generally had fewer "complications" of the kind described above.

The purpose of this investigation was to determine, through a demonstration methodology, what could be done to increase the vocational potential and the vocational education possibilities for disabled individuals who have not been accepted for service by the Department of Rehabilitation and to describe the programs and processes which are necessary to accomplish this.

Previous studies have suggested some of the ingredients needed for vocational success with a disadvantaged and disabled population. An Employment Demonstration Project (Vash and Murray, 1969) demonstrated that many disabled individuals who were previously thought not to be employable were in fact capable of becoming employed if certain services were provided. One thing this study demonstrated was that traditional services have to be modified in order to best serve this population. For example, it was found that some work experience, even in a workshop atmosphere, was necessary before individuals could benefit from vocational counseling. It was also found that group counseling was a better vehicle than individual counseling for maintaining motivation and overcoming the frustrations and disappointments that developed on the road to employment. Vash, Kemp and Moriwaki (1971) investigated the factors contributing to vocational success among disabled individuals already enrolled in community college vocational programs. They found a high

correlation between measures of educational success and the students' measures of personal adjustment and attitude toward disability. In a similar vein, Kemp and Vash (1971) found that among persons injured with a spinal cord injury, those who demonstrated higher levels of vocational success had better personal adjustment, more goals, better family support and greater creativity. Moreover, it was established that even among a highly disabled group, as many as fifty percent could attain some lasting vocational success. All the results outlined above indicate that substantial vocational potential is often found with many people who are not receiving the education or training. It seems reasonable to assume that much of this potential could be realized if appropriate services were utilized.

If successful, the current demonstration could have major impact on the Department of Rehabilitation, the community colleges and perhaps the Employment Development Department. As indicated above, there are approximately 200,000 to 300,000 disabled individuals between the ages of 18 and 50 who could profit from some vocational education experience, either by gaining employment or by helping to gain independence and enhancement of their lives. If only a moderate number of individuals were to achieve success in the project, the results would mean a substantial increase in the use of already available community college and other vocational education programs, when applied state-wide.

The hypotheses investigated in this study can be stated broadly as the following:

- 1) Substantially more disabled individuals can be helped vocationally if the necessary "pre-vocational" experiences and programs are made available.
- 2) Measures of self-esteem, vocational satisfaction, overall adjustment and attitudes toward disability will improve through the provision of "pre-vocational" experiences.
- 3) There will be significant correlations between the measures of gain on self-esteem, etc. and measures of vocational success in the sample.
- 4) Measures of self-esteem, vocational satisfaction, overall adjustment and attitudes toward disability will all reach the same level in the group given the experimental "pre-vocational" services as in a control group of individuals ordinarily accepted for services by the Department of Rehabilitation.

The study was designed as a controlled comparison utilizing an "experimental" group and two comparison groups. The "experimental" group was randomly selected from a population of individuals who were rejected for services by the Department of Rehabilitation. Each subject in this group received "pre-vocational" services as dictated by the needs of the person. One comparison group was from the same population of persons previously rejected by the Department of Rehabilitation, but did not receive "pre-vocational" services. A second comparison group consisted of individuals who had been accepted for service by the Department and who received whatever vocational programs their counselors (Department of Rehabilitation) arranged. Measures of vocational satisfaction, self-esteem, overall adjustment, and attitudes toward disability were taken

before and after the program for each group.

PROCEDURES AND METHODOLOGY

Population and Sample

This study was a controlled comparison utilizing a treatment-no treatment randomized design with matched samples. The treatment group ("08x") and the no-treatment control group ("08c") were randomly selected from the population of those people who had been rejected for services by the Department of Rehabilitation. The appellation "08" is that which is used by the Department to signify those people who have applied and not been accepted for services. Similarly, "18" is the status code for those people who are in active vocational programs.

The treatment control group ("18c") was selected from a population of active clients of the Department of Rehabilitation. The subjects in this latter group were matched for age and degree of disability with the subjects in the 08x group. All subjects in this study met the criteria established by the Department of Rehabilitation as being severely disabled (March 21, 1974 interdepartmental memo, Department of Rehabilitation). In order to insure that the samples were representative of severely disabled individuals in settings outside Rancho Los Amigos Hospital (the project site), recruitment plans were amended to include subjects from the Department of Rehabilitation offices in Downey and Long Beach, as well as from the on-grounds Department of Rehabilitation unit which serves Rancho's population.

Selection of the 08x and 08c groups was accomplished by contacting individuals six months after they were not accepted for service by the

Department. This initial contact was made by letter. For this purpose, two letters were used, one soliciting subjects' involvement in the 08 control group (Appendix A), and another soliciting subjects' involvement in the 08 treatment group (Appendix B). The determination as to which letter was sent was made by flipping a coin for each potential subject. If the subject responded affirmatively, an arrangement was made for either testing (for the 08c group) or counselor involvement (for the 08x group). The 08x group subjects were tested after the counselor's intake interview.

The 18c group was selected through review of records of the Department of Rehabilitation clients who had recently been accepted for services. Following guidelines for age and degree of disability, the study staff contacted potential subjects' counselors to ascertain that involvement in the study would not interfere with their vocational program. After obtaining this clearance, potential subjects were sent a letter (Appendix C) explaining the study and soliciting their involvement. Phone contact was usually established soon after the letter was sent and, if the subject was willing to participate in the study, arrangements were made for the pre-testing session.

In this way, a total of 101 subjects were recruited. Table One represents a breakdown of subjects by their pertinent Department of Rehabilitation unit.

TABLE 1:

Source of subjects for each of the three study samples.

Department of Rehabilitation Unit

Group	Department of Rehabilitation Unit			
	Rancho	Downey	Long Beach	TOTAL
08x	33	1	5	39
08c	14	7	8	29
18c	12	10	11	33
TOTAL	59	18	24	101

Of these subjects, 54 were male and 47 were female. Age ranges in the 08x and 08c groups were 17 years to 64 years, with a mean age for the 08x group of 29 years and a mean age for the 08c group of 37 years. The age range of the 18c group was 21 years to 51 years, with a mean of 34 years. Attempts to match the older subjects in the 08x group with subjects in the 18c group proved impractical due to the Department's requirement that clients accepted for service be 55 years of age or younger. Because it was believed that older individuals could benefit from the "treatment" that was proposed, they were included in the randomized samples, the 08x and 08c groups. All subjects met Department of Rehabilitation criteria as being severely disabled. Many disability categories were represented with no discernible biases toward any one or two particular categories, (e.g., spinal cord injury, diabetes, mental retardation).

Instruments

A psychometric battery comprised of the Minnesota Multiphasic Personality Inventory (MMPI), the Attitude Toward Disabled Persons, scale, a 75 item Q-Sort, and a paper and pencil measure of Vocational Satisfaction was administered to all subjects individually in a pre-post paradigm. These instruments were selected with the goal of differentiating between successful and unsuccessful vocational and pre-vocational subjects. Interest centered on determining how the rejected-for-service and accepted-for-service subjects differed, with what types of people pre-educational and pre-vocational intervention could be helpful, and what effects, if any, could be found which might be attributable to either pre-educational/pre-vocational, or the more standard vocational training programs.

The MMPI was used as a general measure of personal and social adjustment. It was selected for use in this study because of the expectation that many of the subjects in the "08" groups would evince problems of a psychiatric and/or psychosocial nature, to which the MMPI can be expected to be sensitive and reasonably valid. While an attempt was made to administer the "full scale" MMPI (566 items), it was sometimes necessary to administer the shorter "Mini-Mult", (Appendix D), a condensed, 76 item version of the full scale instrument that has been shown to have good validity and reliability (Kincannon, 1968).

The Attitude Toward Disabled Persons (Yukor, Block and Young, 1966) (Appendix E) measures the way in which individuals view the physically disabled. The scales are composed of "Likert-type" attitude items

assessing the extent to which the disabled individual is viewed as being "special" or is perceived as being different from non-disabled individuals. This instrument was chosen in order to query the degree to which a disabled person's vocational success is coincident with his attitudes toward disabled people. Is the person who is successful more accepting of disabled people or less accepting? Is this attitude a pre-cursor of vocational success or one of success' results? These questions were of interest in the investigation.

The 75-item Q-Sort was developed, following the technique of Stephenson (1953), as a means of assessing the congruence between a person's perception of his "real" and "ideal" selves. The Q-Sort consisted of 75 simple self-descriptive statements that were listed, one to a card, on 3" x 5" cards (Appendix F). The subject was required to sort these cards into a nine point continuum from "most like me" to "least like me", with predetermined frequencies in each group, based upon the normal distribution. Two sorts were conducted, the first with instructions to the subject to sort the cards in such a way that it "depicts yourself as you really are, as you see yourself today". The second sort was undertaken with instructions to the subject to "sort the cards as you would like to be, ideally".

The paper and pencil measure of Career Satisfaction (Appendix G) was developed especially for this study. The instrument is a simple checklist which was designed to assess the relative degree of reported satisfaction with vocational involvement.

In addition to the standard psychometric battery, a Work and Activity Assessment Questionnaire (Appendix H) was administered to all subjects who participated in the post-testing. The intent of this instrument was to gather information on subjects' activity involvement and their reported general life satisfaction.

The battery was regularly administered in the following order:

1. Q-Sort - "Real"
2. Attitude Toward Disabled Persons (ATDP)
3. Q-Sort - "Ideal"
4. Vocational Satisfaction Questionnaire
5. MMPI
6. Work and Activity Assessment Questionnaire (Post-test only)

The post-test battery was administered to subjects in the 08x group immediately after the conclusion of their involvement in the active treatment phase of the study. This pre-post interval was duplicated for the subjects in the 08c and 18c groups.

Outcome Measures

In addition to the psychometric battery and self-report questionnaires, several indices of vocational success were studied. This information was gathered at the conclusion of the study. The measures included:

1. Employment - Full or part-time participation in a vocational activity for which the subject received remuneration.
2. Active Job Search - After completion of a vocational preparation program, prior to securing employment. This category was limited

to those people who were actively involved in job search activities, not merely passively waiting for a vocational opportunity.

3. Acceptance for services by the Department of Rehabilitation - One goal of the treatment program was to prepare people to take advantage of existing services. Acceptance by the Department of Rehabilitation connoted attainment of that goal. This was applicable only to the 08x and 08c groups. The 18c group was defined as those subjects who already have an active case with the Department.
4. Enrollment in a vocational education or training program - This category included all those people who were actively enrolled in a program that had a vocational objective.
5. Completion of a vocational education or training program - This category included all those people who successfully completed programs which had vocational objectives.

Data on these variables were collected for the 08x group by report of the study counselor. The data were fairly complete and generally considered to have high reliability. Data for the 18c group were supplied through a phone interview with each of this group's subjects' counselors. The data were considered to be reliable and are missing in relatively few cases, mostly through loss of counselor - subject contact. Data for the 08c group were collected by self-report via the Work and Activities Assessment Questionnaire for those 08c subjects who were available for post-testing. Because many of these subjects did not return for the post-test (35% did not return), follow-up telephone contacts to gather this data were attempted, some of which were successful.

Vocational and Educational Programs

The treatment program was conducted at Rancho Los Amigos Hospital, which is a rehabilitation hospital supported by the County of Los Angeles. The facilities utilized for counseling support were largely those available through the Vocational Services Department and the hospital (e.g., Occupational Therapy, Physical Therapy, Psychology, Social Work, Communication Disorders, etc.). Easy access to consultation and services available at the hospital, including operation of a multidisciplinary approach to vocational rehabilitation problems, added a valuable dimension to the treatment goals of this project.

The goals of the treatment program were to:

1. Aid clients formerly rejected by the California State Department of Rehabilitation to be accepted for services.
2. To help clients become employed or engaged in a vocational education or training program without the aid of the Department of Rehabilitation.
3. To help clients achieve a satisfactory style of life without necessarily seeking or becoming competitively employed.

All of the clients in the treatment group were assigned to the project counselor, who became the primary person responsible for his or her participation in the program. A special point was made of selecting a representative counselor from among those considered for the project, thus trying to insure that the results attained would hold with other counselors. It was the responsibility of the project counselor to individually design appropriate treatment programs for clients and to make referrals

to the support programs available throughout the hospital, most of which were in the Vocational Service Department. Because of the intensive needs of the clients requiring treatment, the caseload size averaged 25 clients and never exceeded 30 clients at any given time. It was originally expected that the caseload would average about 30, but this was not feasible.

The treatment program was pre-vocational (as opposed to vocational) in nature. The emphasis, in effect, was on preparation for subsequent vocational education or training programs. Prevocational service was primarily concerned with the development of a client's work habits, work tolerance, work adjustment, motivation and production. The program paid special attention to the client's personal adjustment, social personality, and the attitudinal variables essential to success in a training or education situation. Supportive service was provided to those who required assistance in adjusting to a work environment because of a lack of confidence, anxiety, or an extreme fear of new situations. Improving a client's physical functioning was also stressed in the pre-vocational domain.

This is in contrast to the vocational client who possesses most of the basic preliminary skills to become trained or skilled in an occupation. The pyramid that follows illustrates the process of vocational rehabilitation and separates prevocational processes from those that are vocational.

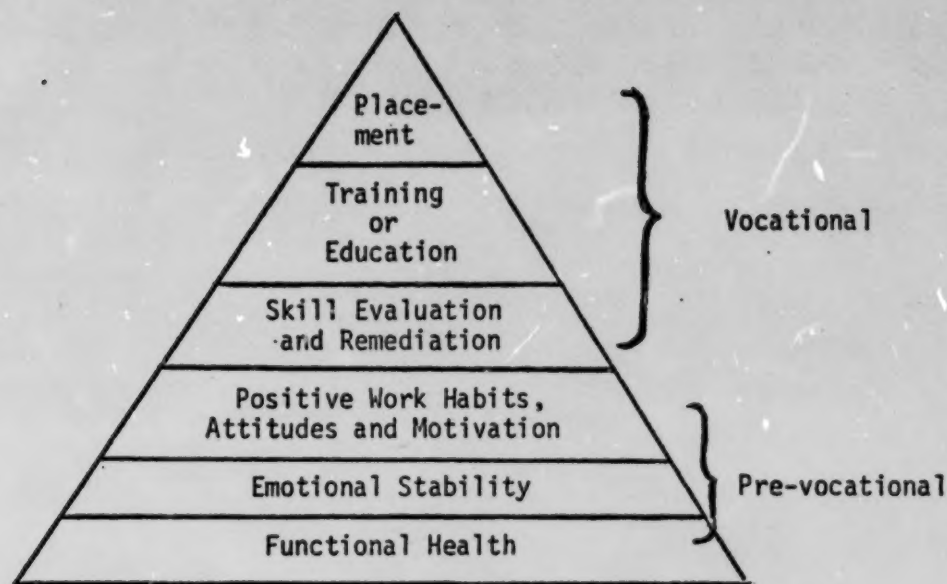


Figure 1: Pre-vocational and Vocational Aspects of Program.

The traits at the base of the pyramid are more basic to those at the higher levels, and without them, vocational success cannot be attained. Development of pre-vocational traits demands that a special emphasis be placed on counseling. The number of counseling sessions given to any client was based on the counselor's clinical judgment of what the client's needs indicated. Some clients were seen once a week, some less often, and in a few cases counseling might be scheduled biweekly for short intervals. Of special significance is that counseling would immediately take place whenever a crisis situation arose.

The intensive counseling program and the pre-vocational support services offered through Rancho Los Amigos Hospital's Vocational Services Department were designed to address themselves to the pre-vocational

client who most often seems to be socioeconomically disadvantaged, has either no work experience or low level skill development, is either educationally deprived or possesses limited intellectual resources, often presents medical difficulties in addition to his major disabling condition and has societal adjustment problems that are often a result of minority ethnic status and background. In addition, most were on welfare incomes provided through Social Security (SSI).

The Role of Supplemental Security Income in the Achievement of Vocational

Success. When the Federal government took over jurisdiction for what was once the County's programs of Aid to the Disabled, it created a Federal Supplemental Security Income program. This program also makes people eligible for the benefits under Medi-Cal. Since the people in question are handicapped and many have recurring medical problems, the health-protection benefits of Medi-Cal are as important, or even more important, than the cash benefits of SSI.

The current SSI-Medi-Cal programs have two aspects which significantly affected success in this project and which would affect other programs trying to accomplish the same educational and vocational objectives.

The first is the dis-incentive aspect of SSI and Medi-Cal. If a disabled person seeks to obtain some vocational success and enter into the needed educational and training processes needed to accomplish this, he is faced with the prospect of losing not only his cash benefit, but his medical coverage as well. This presents a tremendous de-motivator

to many individuals entering into vocational education programs. Why try to succeed if employment means losing so much? Employer-sponsored private health insurance does not fill the need because of its usual restrictions on who may be covered and the extent of coverage.

The second problem arises in helping individuals sort out problems with the system. Many individuals rely upon these benefits for their sole support. When problems arise, such as computer foul-ups or missing checks, recipients are naturally upset and this results in heightened degrees of anxiety and worry with resultant inefficiency at school or work.

Both these problems must be solved to reap the full benefits from projects such as this one.

The remainder of this section will concern itself with describing the pre-vocational support services available through the Vocational Services Department, which attempts to deal with the aforementioned problems. It will describe the counseling program and will conclude with some case illustrations.

The basic support services utilized for purposes of this study included a rehabilitation workshop, a work experience program utilizing hospital-based work stations, Cerritos College Vocational Education satellite campus, a Skill Evaluation Clinic, and a Vocational Residence.

Workshop. The "rehabilitation" workshop has as its primary function the modification of inappropriate work behavior as may be identified through evaluation. It is not a sheltered workshop, but is set up to operate as

nearly like an industrial job shop as possible. Clients are supervised in the same fashion as would occur in competitive industry. They are furnished with time cards and are paid for their work in accordance with their rate of production. Paychecks are issued on a bimonthly basis. The project counselor made referrals and requested the type of evaluation information needed on an individual client basis (e.g., response to supervision, responsibility).

The workshop is a subcontract shop which undertakes contracts which are both ongoing and temporary, such as light assembly jobs, packaging, etc. The contracts are intended to provide job tasks equivalent to entry level jobs in industry. The tasks require varying degrees of dexterity and learning ability from simple, repetitive gross tasks to the more complex and intricate which may require fine dexterity involving a multiple-step procedure. The focus is on the development of work habits, productivity, work tolerance, and other aspects of work behavior which can be treated on an individual basis.

An example of a treatment approach that may be employed in the workshop for developing or altering faulty work habits is "behavior modification". This could also be used on hospital work stations (described below), but was more suitable as a treatment approach to the workshop environment. A system of rewards would be developed that would be of significance to the client (i.e., Workshop Instructor praise, promotion to more prestigious tasks, raises, tokens) as an aid in diminishing the client's poor work behavior. The program, if initiated,

tends to emphasize rewards as opposed to the use of punishment. Persistent negative work behavior resulted in the natural consequences that would be present in any normal work setting. The length of stay in the workshop would vary depending upon the individual client and the complexity of his or her needs.

Work Experience Program. Often the workshop setting was not appropriate for certain pre-vocational clients. To perform an evaluation on a client that is primarily centered around productivity, dexterity, or assembly orientation when the client does not have any reasonable potential or lacks interest in this regard would almost ensure a negative evaluation experience. Some individuals may feel they are being assigned to a "menial" task and can end up sabotaging their own rehabilitation efforts. The Work Experience Program provides an outstanding alternative to such dilemmas. It utilizes the vast array of job categories performed at the hospital for the development of client work stations.

The Work Experience Program can be viewed as a work habits/skills development "halfway house". Many types of potential work station slots can be developed as they relate to an individual's interests, assets and liabilities. Examples include several types of clerical positions requiring varying degrees of complexity, X-ray Technician Helper, sorting and counting materials for Central Service Supply, grounds maintenance, Laboratory Assistant, delivering medical charts, threading suture needles for Kinesiology, or Recreation Aide, to mention a few.

The counselor was responsible for developing appropriate work stations when indicated. Standard procedure was to approach the

department head or supervisor within the department where a work experience slot was desired. Explanation of the Work Experience Program, the specific client needs and subsequent orientation would occur. The orientation would seek to help the supervisor make realistic work demands so as to avoid both too much complexity or provide a "special" situation as a result of the individual's disability. Clear guidelines were developed to spell out the purposes for the work station in the presence of the client. The most important feature of the Work Experience Program lies in its potential to provide an actual employment situation surrounded by regular employees, with "real life" supervision and so forth. At the same time, attention can be focused on prevocational problems (i.e., work habits, attitudes, motivation, emotional stability) within this realistic framework.

The Work Experience Program is normally structured with a six month duration (which could be extended). The first three months constituted an evaluation phase with an hourly wage of \$1.25 per hour. The final three months constituted experience and training and could represent a wage of \$2.30 per hour (minimum wage) or lower based on supervisonal and counselor recommendations regarding an individual's performance.

Cerritos College Vocational Program. The Cerritos College adult education program provided another valuable asset to the pre-vocational treatment process by fulfilling such needs as remedial education, GED and civil service examination preparation, courses dealing with "Work Personality Development" and "Vocational Grooming Behavior", and training

in basic business and office skills, including clerical accounting and bookkeeping. The Cerritos Rancho program is a satellite campus of the Cerritos Community College in Norwalk.

The main features of this program were its easy accessibility (location on Rancho grounds and architectural design), its flexibility of instruction and student-oriented approach. Classes were open-ended, allowing clients to enroll at any time, thus avoiding the effects of prolonged delay. Class sizes were small and were individually tailored to meet the needs and pace of each student. The program's pre-vocational attractiveness was its ability to deal with clients who have suffered loss of learning skills following traumatic injury or illness, those who lacked schooling for cultural or economic reasons, or who had learning difficulties of a psychogenic origin. Remedial education was provided in the development of basic learning skills through reading, writing and arithmetic.

Here again, the referral would be made by the counselor and a program would be planned in conjunction with the Cerritos staff. It would utilize the expertise of an educational evaluator (to be described later) when indicated. Course work could be taken in addition to involvement on a work station or within the workshop.

Skill Evaluation Clinic. Routine testing, with the exception of the tests that were administered at the beginning of the treatment process for research purposes, was avoided. Testing was utilized only when diagnostic educational information was needed that could not be abstracted

from any of the client's former experiences or when the need for test-generated information became apparent through the course of treatment (i.e., counseling, workshop, work experience, Cerritos, etc.). In this way a more thorough assessment through testing could be achieved and the testing information could then make more sense to the client. Since information from personality inventories (MMPI, Q-Sort, etc.) was readily available, referral to the skill evaluation clinic was made for the purposes of administration of vocational interest tests, skill tests along with the creation of "hands-on" work sample evaluations and assesment of the appropriateness or usefulness of assistive devices, electronic equipment, etc. for educational or vocational purposes. Hence, the Skill Evaluation Clinic had as its basic function the evaluation of those skills that relate to an individual's ability to work.

The personality inventories administered for pre-test data also served to provide the counselor additional assessment of a person's motivation to return to work and aided in determining the appropriate direction that counseling intervention should take. Clearer assessment of personality factors that relate to differing job functions could be explored with the client.

Interest tests were used on occasion with special attention to their appropriateness in terms of clients' abilities. These included the Strong Vocational Interest Blank, useful for those individuals interested in and with ability for the more professional and technical occupations. Similarly, the Minnesota Vocational Interest Inventory was used for clients with inclination toward blue-collar-type jobs. Other interest

tests which were used included the Kuder Preference Record and the California Occupational Preference Survey Inventory.

Along with the various paper and pencil tests such as the O'Rourke Mechanical Reasoning Test, Crawford Small Parts Tests, Bennett Hand Tool Test, and the Purdue Pegboard to measure hand dexterity, clients would be provided with "hands-on" experience through work samples. Thus, when testing pointed to a certain occupation or a client voiced an interest in some occupational activity, it could be explored further. The only way to really determine whether an individual would like a specific job was to give him a sample of the job to perform and let him experience it. The client gains an opportunity to test his ability at a certain job task, and to understand what is really involved in a particular occupation from a "doing" rather than a "seeing" standpoint. A determination of the client's efficiency can be determined and the possible use of assistive devices to help the client achieve maximum performance can be explored.

The skill evaluation approach seeks to explore a comprehensive range of possible work skills. It goes beyond simple examination of physical strength and hand dexterity (abilities that are most often affected by a severe disability) and focuses on some non-traditional approaches to skill evaluation. Almost any job conceivable requires a worker to have skills along at least one of the following dimensions: 1) Brain; 2) Brawn; 3) Hand dexterity; or 4) Personality. Hence, an evaluation of a person's ability to perform in the "people-related" or "idea related" occupations utilizing "Brain" and/or "Personality" resources is necessary

in determining a severely disabled individual's ability to work. Referral requests from the counselor would initiate the skill clinic staff in developing skill evaluation opportunities along such lines.

A critical component in the skill evaluation clinic was the educational evaluation that was performed by a learning disabilities specialist. He examined the client's background, including educational history and current verbal and nonverbal skill evaluation. Determination was made of the client's benefit from his educational background, whether the disability affected cognitive functioning, and the client's current level of reading, mathematical and spelling skills. The evaluator assisted in making specific recommendations for educational remediation, such as suggesting alternative ways of conveying information and possible teaching approaches. This became valuable information that aided in the proper direction of counseling. Examples of some of the tests used by the evaluator included: Wechler Adult Intelligence Scale, Stanford Binet, School College Achievement Test, Wide Range Achievement, Wilson-Sight Vocabulary, Dolseb Word List, Pictorial Reasoning and the Fry.

Vocational Residence. Another potential resource available to clients in the development of a vocational program was an on-grounds vocational residence referred to as "Casa Consuelo". The residence was available for individuals who were basically stable medically and semi-independent in self-care activities. Casa Consuelo provided an around-the-clock psychosocial living arrangement which was an excellent vehicle for the development of independent living skills. Residents were required to

be responsible for the care of their own rooms and were further briefed with a rule guide similar to ordinary dormitory requirements.

A referral by the project counselor to the vocational residence would occur when the following client needs were evident:

1. Severe transportation and/or housing problems.
2. Sufficient socio-familial or behavioral problems present which deterred or continually sabotaged efforts toward vocational or educational progress. Casa was extremely beneficial when chronic familial dysfunction existed and when families were resisting help for the individual client.
3. Special attention was required in developing self-responsibility and independent living skills.

Counseling Intervention. The basic philosophical orientation of counseling intervention, regardless of the specific techniques employed, was that counseling should occur against a background of concurrent work activity. The focus was on the development of attitudes and work habits that would be valuable to a vocational-education training program or an employment situation. Thus, the counseling that occurred was bound and interwoven with the preparation experience in the workshop, on a work station, Cerritos educational program, etc.

The predominant mode of counseling used throughout the project was individual sessions. Group counseling could be used only sparingly, mainly because of the difficulty in arranging a scheduled meeting that could meet the needs of from eight to twelve clients, many already dealing with

complicated transportation and scheduling engagements. Some groups were used later in a client's vocational program, but these groups tended to be more task-oriented groups (e.g., placement interviewing) rather than therapy groups. Specifically, the group was formed for individuals evidencing significant progress toward vocational goals and it dealt with issues such as preparing for a job interview, writing a resumé, job hunting, etc.

The counseling that was utilized tended to be a humanistically based existential approach. This approach is based on helping individuals to understand the choices they still have in their life (even after a disability), the responsibility they still have for what happens to them, the need to deal with reality regarding their assets and liabilities and to work with the best possible alternatives. Emphasis is placed on the client's need and right to make his own decisions. The focus continually remained on the client's goals and desires rather than the counselor's, society's, etc. "Work" was viewed as good, but was never forced on the client when this view was inconsistent with his/her value system. Rehabilitation was defined to include more than just vocational placement and viewed personal growth gains as meaningful indicators of success.

The task of the counselor was one of helping the client to recognize alternative decisions, the reason for having made particular decisions, and the probable consequences entailed. Programs were developed that afforded individuals ample opportunity for utilizing their own decision-

making skills. It was expected that initiative and creativity would emerge if the client perceived the counselor's support and acceptance, even if the beginning attempts made by the client appeared unrealistic or inappropriate.

The tone of the counseling sessions (especially initially) was non-directive. The counselor paid attention to providing high levels of the core therapeutic ingredients to a constructive relationship (Truax and Carkhuff, 1967). These primary core dimensions to functioning in a helping role include empathy, respect, genuineness and concreteness. The purpose was to clarify feelings the client might have regarding his/her disability, feelings of adequacy, dependency or other issues critical to vocational movement. An atmosphere that allowed for verbalization and clarification of feelings was seen as aiding in the development of realistic vocational or avocational plans (i.e., style of life).

Adjunctive to the exploration of feelings was the introduction and discussion of various jobs that related to the client's interest and personal history. Counseling also included discussion of an individual's performance and evaluations in an attempt to make sense out of these as they related to the client's expression of goals and desires. Confrontation would occur with respect to the discrepancy between a client's stated goals and the behavior that was incongruent to reaching such goals. Many counseling sessions were arranged as a result of some crisis situation, as a problem would occur in one of the preparation support areas. Hence, crisis intervention counseling techniques were

employed to deal with such situations immediately when they occurred. This was the maximum use of the "counseling against work activity" orientation. The project counselor would be available upon demand in such situations. As a result, emotionally-charged work problems could be dealt with on the spot. Angry feelings, problem work behavior, dysfunctional communication could be worked through before defensive rationalization or added dysfunction set in. Clients were also provided with a model for dealing with such work related issues in a reality based situation. New behavior could be attempted by the client, and the effects of a delay in waiting for a future counseling appointment were avoided. Family counseling was conducted in several instances where parental influences or family relationships appeared to be sabotaging or potentially disrupting a client's participation in rehabilitation toward independence. Even if direct family relationship counseling did not occur, involvement of family members in the rehabilitation process was encouraged. The disabled person fulfills vital roles within the family structure and, in this sense, family counseling could be useful in all vocational rehabilitation efforts. A problem which frequently occurred in dysfunctional families was the tendency of family members to deny their own involvement in the vocational success of the individual and instead saw the disabled client as the one in need of services. Hence, individual counseling remained in the foreground, by necessity, for the majority of clients served in this study.

Many individuals would end their vocational programs as a result of dropping out or after reaching personal and/or project goals where

subsequent pre-vocational support was not indicated. Most of the clients in the study who were accepted by the Department of Rehabilitation were not discharged from project treatment. These people continued to require extensive support and time involvement such as dealing with anxiety in new situations or they might require continual counseling support while enrolled in a vocational-education or on-the-job training situation. Effective conjoint treatment approaches were possible and were developed because of the close relationship of the Rancho Department of Rehabilitation unit and the grant pre-vocational unit. The fact that two counselors were now involved as a team increased the vocational prognosis for these marginal cases.

CASE ILLUSTRATION:

Client I

Client I was a 25 year-old severely disabled young man with diabetes since age four, cerebral palsy and a psychiatric dysfunction. This person had a long and continued history of institutionalization and was left with corresponding social, emotional and, especially, educational handicaps. A summary of the vocational education program is as follows:

1. Workshop for evaluation and treatment of work behavior with emphasis on developing ability to work four hours per day as a minimum.
2. Educational evaluation.
3. Cerritos College for remedial education classes.
4. Intensive personal counseling (one hour per week) focusing on vulnerability to stress, medication management, assertion training,

and creation of an atmosphere which allowed for decision-making and responsibility of action.

5. Vocational residence to allow further development of responsibility and social adjustment.

Program Changes

The needs of the individuals served in this demonstration study dictated a number of changes throughout the course of the study in order to accomplish its objectives.

First, the need for many individuals to receive evaluation and work experience at work stations outside the rehabilitation workshop resulted in the hiring and development of a Work Experience Coordinator. This service proved to be invaluable to many disabled individuals. Evaluations of interest and aptitude could be accomplished through work stations developed in the hospital environment. Secondly, realistic work experience could be utilized to develop self-confidence, skills and a work history.

A second need was for community work involvement. Because of the needs of many people in the sample for transportation assistance, public social service and social security assistance, assistance with obtaining driver's licenses and many other community-centered problems, a community worker was deemed necessary and was devoted to the project.

As the project progressed, it became apparent that the individual needing service would require extensive and multiple services to an extent greater than originally anticipated. So as not to dilute the

quality of service being provided, the project's original goals were reduced. Instead of trying to reach 65 individuals, the project aimed at reaching 45; at the study's end, forty-three individuals were given at least some degree of service.

RESULTS

The overall results are divided into three main areas: 1) the vocational and educational outcomes of the three different groups; 2) the comparisons of the three groups on the psychological measures of attitudes, adjustment and satisfaction, both before and after the program; and 3) the relationships between the psychological measures and the objective vocational and educational outcomes. The purpose of this latter analysis was to determine if any key psychological factors contributed to vocational or educational success in the groups.

I. Vocational and Educational Outcomes.

An attempt was made to find suitable criteria of success for the project. Several measures were used for comparison purposes, including enrollment in vocational preparation programs, completion of vocational preparation and training programs, the number of people becoming employed and the number of people eventually accepted by the Department of Rehabilitation from the experimental group (all of whom had been rejected by the Department of Rehabilitation at one time). The results of the program on the various outcome measures are presented in Table 2.

TABLE 2:

Vocational and Educational Outcomes for Three Different Groups at Study's End

	Experimental (08x)	No-Treatment Control (08c)	Originally Accepted by Dept. Rehab. (18c)
a. referred:	43	26	26
b. accepted and service started:	36 (84%)	None served	26 (100%)
c. determined infeasible or who dropped out:	7 (16%)		3 (12%)
d. completing study:	31 (86%)	26	23 (88%)
e. enrolled in a vocational preparation program (e.g., remedial education, work adjustment, personal counseling):	31 (100%) (Not in conjunction with training program).		6 (26% est.) (In conjunction with training program).
f. enrolled in a vocational training or education program:	9 (29%)		22 (96%)
g. still active in vocational preparation program at study's end:	9 (29%)		0 (0%)
h. still active in a vocational training or education program at study's end:	3 (10%)		11 (48%)
i. completing vocational education or training program:	6 (19%)		11 (48%)
j. entering into job search activities:	4 (13%)	6 (23%)	7 (30%)
k. employed at study's end:	6 (19%)	7 (27%)	4 (17%)
a. full-time:	4	1	4
b. part-time:	2	6	0
l. of additional cases likely to become employed:	5		11
m. of previously rejected cases accepted by Dept. of Rehabilitation:	11 (35%)	0 (0%)	
n. helped to gain independence with no vocational goal:	4 (13%)		

The results indicate several important achievements. First, it can be seen that the number served in the experimental group was less than anticipated. This results entirely from the difficulty and the complexity of the problems besetting the persons in this group. The problems often covered medical, psychological, economic, legal, social and educational handicaps. The difficulty of helping these individuals to achieve any measure of vocational/educational success should be considered in the interpretation of the data and in the implementation of similar programs by others.

Overall, 31 subjects completed the study from the experimental group, 26 from the non-served control group and 23 from the originally accepted group. All 31 of the experimental group were enrolled in a vocational preparation program as opposed to 26 percent of the originally accepted group. It is assumed that the non-served group received little service, although it proved impossible to follow this group carefully throughout the study due to their high degree of mobility and lack of communication with the study.

Vocational preparation (or pre-vocational) programs were developed individually to deal with each client/subject's unique needs. Pre-vocational emphasis was absolutely necessary in every case before the person could expect to have a reasonable expectation of success in a regular vocational/education program. Making a greater use of vocational education programs at community college level is not simply a matter of enrolling the individuals. The pre-vocational programs were all heavily clinically oriented, making great use of personal counseling,

family counseling, work adjustment and remedial education. The earlier section on "Program" explains these services. Only 26 percent of the originally accepted group required pre-vocational preparatory programs and these were always in conjunction with a vocational training program. These individual's needs were not of the same level and generally not complicated by the multi-faceted difficulties facing the experimental subjects.

Twenty-nine percent of the experimental group enrolled in a vocational education or training program (at least part of which was provided by a community college in most instances) compared to none in the control group and 96 percent in the originally accepted group. This result supports the original hypothesis of the study which stated that at least ten percent would be successful. Considering that there are about 200,000 disabled individuals in California who are not served by the Department of Rehabilitation or the Employment Development Department (and thus unlikely to be enrolled in such programs), this means that approximately 60,000 more individuals could be served than is now the case.

Approximately two-thirds of all people in the experimental group and the originally accepted group completed a training or educational program or were reasonably expected to complete it at some time after the study's end. Again, no reliable data could be generated for the non-served control group.

By the time of the study's termination, 19 percent of the experimental group, 17 percent of the originally accepted group and, surprisingly,

27 percent of the non-served control subjects (!) were employed. This latter figure was double-checked by repeat detailed telephone interviews to each of the subjects.

Some qualitative differences in employment status existed between the groups. All of the originally accepted subjects were employed full-time. Two-thirds of the experimental employed subjects were employed full-time and one-third part-time, and 86 percent of the non-served control subjects were employed part-time and only 14 percent full-time. In addition, the originally accepted subjects seemed to be engaged in higher level and better paying jobs, with the experimental subjects second and the non-served control subjects at the lowest level of the three. Also, five additional experimental subjects and eleven additional originally accepted subjects were expected to achieve employment status but had not done so at the end of the study. Thus, approximately 35 percent of the previously rejected but experimentally served individuals had achieved employment status or would be expected to do so. If these results were generalized to the full population of non-served individuals in California, it is conservatively estimated that an additional 30,000 disabled individuals could be placed into employment. The tax savings and revenue-generating funds would more than offset the costs but it is absolutely essential that these pre-vocational needs be met.

Table 3 presents a summary of the kinds of services provided to individuals in the experimental (pre-vocational) group. Everyone received vocational counseling to some degree. The next most frequently provided services were extensive personal counseling, skill and/or educational evaluation, work experience (work-study or work stations) and community college vocational programs. These most-frequently provided services reflect the needs of the sample. Extensive personal counseling was needed around such topics as adjustment to disability, independence-dependency conflicts, work adjustment, response to supervision, personal difficulties, self-esteem and personal and family relationships. Skill and/or educational evaluations were needed to discover the individual's vocational assets and his/her educational deficits that needed remediation.

An additional resource that was widely used and which holds great promise is work experience. Work experience (work-study, work stations) provides realistic experience at an actual job site. These experiences were arranged in such locations as the laboratory, landscaping, kitchen, library, clerical tasks, assembly tasks and nursing. Overall, a successful vocational preparation program for individuals similar to those in the experimental group would appear to be a short-term program combining educational remediation, personal counseling, work experience and limited regular community college vocational classes. Most of the individuals in the experimental group could become employed after such a short-term experience and either did not need or would not be able to complete a regular two-year program.

TABLE 3:

Kinds of Services Provided to Experimental Group Subjects

Kind of Service	Number (and Percentage) Receiving Service
Extensive Personal Counseling	17 (57%)
Vocational Counseling	36 (100%)
Family Counseling	7
Independent Living Experience	6
Skill and/or Educational Evaluation	17
Remedial Education	6
Community College Programs	13
Workshop Evaluation	14
Work Experience	18
Assistance in Helping to Solve Supplemental Security Income (SSI) Problems	7
Legal Aid	2
Transportation Assistance	7

Table 4 presents the kinds of vocational and/or remedial education programs that were provided through community colleges during the project.

TABLE 4:
Kinds of Programs Provided Through Community Colleges
For Experimental Subjects

Kind of Program	Number of Students	Total Number of Units
Remedial Education	8	54
Career Education	10	66
Total	13 students	120 units
Average		9.2 units each

A total of thirteen students took a total of 120 units of course work. Of these 120 units, 54 were remedial in nature and 65 were career education in nature. Few (two) experimental subjects were enrolled for a full two-year vocational program through a community college. If these results were extrapolated to the total handicapped population in California that is not served by either the Department of Rehabilitation or the Employment Development Department, it is conservatively estimated that an additional 535,000 units would be taken at community colleges each year.

Table 5 depicts the length of time individuals in both the experimental and the originally accepted groups were involved in vocational education programs in order to reach various phases of success in the project. The originally accepted group took an average of one month to reach a readiness for actual vocational training or vocational education. The experimental group took an average of four months preparation. In order to reach a "successful" phase (completed training, reach job search or become employed), the originally accepted group took an average of four months (with a range of 2 to 6 months) and the experimental subjects took an average of 7 months (with a range of 3 to 15 months). Obviously, the experimental group took much longer to reach the various stages of employment readiness.

TABLE 5:

Length of Time in Program for Experimental and Comparison Groups

	<u>Groups</u>	
	Experimental	Originally Accepted
To reach training phase	4 mos.	1 mo.
To reach "successful" phase	7 mos. (range 3-15)	4 mos. (range 2-6)

II. Differences Among the Groups on Psychological Measures.

Four different psychological instruments were administered before and after the program for each group. The non-served control subjects were tested after a comparable time as their served counterparts. The four measures, described earlier, were:

1. Self-satisfaction (congruency) as measured by the Q-Sort methodology;
2. Personal adjustment measured both by the number of scales elevated on the MMPI and by expert judges' ratings of the MMPI profile;
3. Career/vocational satisfaction, measured by a specially-designed questionnaire, and
4. Attitudes toward disability, as measured by the Attitudes Toward Disabled Persons scale.

Two-way analyses of variance with repeated measures on one variable (Winer, 1971) were conducted for all comparisons. The comparisons provided were among groups (experimental, control, originally accepted) over time (before and after) and the interaction of time and group.

1. Self satisfaction

The data were analyzed by taking the correlation of the two sorts on the Q-Sort questions, converting the correlations to z-scores by Fischer's r to z transformation before conducting the analysis. Also, the data were first corrected for a "floor effect" in comparisons between correlations (due to the relatively

greater probability of increasing from a .00 correlation than from a .50 correlation by chance alone, for example). This was done by computing a linear regression between the first measurement and the "expected" measure as the true comparison (c.f., Lieber, 1974). The higher the score, the greater the similarity between how a person actually perceives himself and how he would like to be (i.e., greater congruency and higher self-satisfaction).

The results of these comparisons are presented in Tables 6 and 7. Table 6 shows the mean z-score transformations for each group before and after service. Table 7 shows the analysis of variance conducted on these data. None of the comparisons was significant. Although the data tend to show the DR accepted group to be higher, the experimental group second and the control group third, these differences were not reliable. Likewise, there were no differences between the overall groups before and after the program.

TABLE 6:

Mean Q-Sort Scores* (corrected for floor effect) for Each Group Before and After Program

Time of Measurement	GROUP					
	Experimental		Control		DR Accepted	
	(n=25)		(n=18)		(n=20)	
	$\bar{x}^*$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Before	.74	.45	.63	.43	.88	.47
After	.76	.34	.62	.30	.90	.23
Difference	.02		-.01		.02	

*Represented by mean z-score values for each group.

TABLE 7:

Anova Summary Table - Q-Sort

Source	MS	df	F	P
Between Groups	.65264	2	2.35410	.104 n.s.
Error	.27724	60		
Time	.00408	1	.27445	.602 n.s.
Time x Groups	.00286	2	.19192	n.s.
Error	.01448	60	48	

2. Personal adjustment

The first measure of overall adjustment was the number of scales on the MMPI that were equal to or greater than ($\geq$) 70 (which is the usual cut-off score indicating an area of clinical concern). These results are presented in Tables 8 and 9 for the subjects with complete data sets. Overall, there were no significant differences among any of the comparisons, although there was a trend ($p \geq .06$) for the non-served control subjects to have more scales elevated. This may represent some "self-selection" on the part of those who were in the experimental group in as much as all subjects volunteered to participate in the study and some may have declined due to their own personal adjustment difficulties.

TABLE 8:

Mean Number of MMPI Scales > 70 Before and After Program

Time of Measurement	GROUP					
	Experimental		Control		DR Accepted	
	(n=26)		(n=16)		(n=22)	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Before	1.61	2.26	3.00	2.78	2.0	2.49
After	1.92	1.90	3.75	3.11	2.09	2.20
Difference	.31		.75		.09	

TABLE 9;

ANOVA Summary Table: MMPI Scores > 70

Source	MS	df	F	P
Between Groups	27.16	2	2.912	.062 n.s.
Error	9.30	61		
Time	4.50	1	1.91942	.171 n.s.
Time x Groups	1.02	2	.43464	.649 n.s.
Error	2.35	61		

The second measure of overall adjustment taken was the average of three expert judges' ratings. Ratings were on a five-point scale, from "adequately adjusted" to "severely maladjusted". An intraclass correlation coefficient was conducted to determine the reliability among the judges' ratings. The results of this analysis indicated a correlation of .86, significant at $p \geq .01$.

Again, there were no significant differences among the groups, over time or due to the interaction. There was a slight trend toward the control group to have higher scores but this was not statistically reliable. Overall, individuals did not improve in their adjustment over the course of the project.

TABLE 10:

Average Judges' Ratings of Overall Adjustment Before and After Program*

Time of Measurement	GROUP					
	Experimental		Control		DR Accepted	
	(n=26)		(n=17)		(n=22)	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Before	2.47	3.48	3.08	4.11	2.59	3.77
After	2.41	3.40	3.21	4.14	2.68	3.60
Difference	- .06		.13		.09	

*Higher scores indicate ratings of poorer adjustment.

TABLE 11:

ANOVA Summary Table: Judges' Ratings

Source	MS	df	F	P
Between Groups	46.88	2	2.175	.122 n.s.
Error	21.55	62		
Time	.85	1	.14055	.709 n.s.
Time x Groups	1.12	2	.18617	.831 n.s.
Error	6.04	62		

The third psychological measure used in the study was of vocational satisfaction. This was measured by a specially-constructed questionnaire (see Appendix G).

The results of the vocational satisfaction questionnaire for the overall group are depicted in Tables 12 and 13.

The maximum score for this instrument is 53, indicating high vocational satisfaction. The scores of all groups fall near the median. The lack of significant pre-post differences may be due to a "lag-effect" for this variable. At the conceptual level, vocational satisfaction is dependent on significant interaction with a vocational task or environment. The lack of change over time may flow from the recency of the post test session to the change in vocational status of those who were successful.

The overall results again indicate no significant differences between the groups, over time, or the interaction between these factors. There was some tendency ($p < .075$) for the scores to decrease over time, suggesting some lessening of satisfaction, but again, this was not statistically reliable.

TABLE 12

Mean Career Satisfaction Scores Before and After Program*

Time of Measurement	GROUP					
	Experimental (n=23)		Control (n=16)		DR Accepted (n=20)	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Before	31.04	6.57	30.31	4.99	32.55	3.57
After	29.95	3.71	29.31	2.75	30.45	2.64
Difference	- 1.09		-1.00		-2.1	

*Higher scores indicate greater satisfaction. Total possible is 35

TABLE 13

ANOVA Summary Table: Career Satisfaction

Source	MS	df	F	P
Between Groups	26.19	2	1.26	.291 n.s.
Error	20.75	56		
Time	56.19	1	3.30	.075 n.s.
Time x Groups	3.65	2	.214	.807 n.s.
Error	17.01	56		

The fourth psychological measure used in the study was a measure of Attitudes Toward Disabled Persons. Higher scores tend to indicate more favorable attitudes toward disability and lower scores tend to reflect attitudes that disabled individuals are different from and inferior to the non-disabled population. The results of the overall group comparisons are presented in Tables 14 and 15. The overall results were again non-significant in all comparisons. There were no differences between the groups, or over time, or due to the interaction effect. In comparison to published norms, the groups obtained scores about two standard deviations below the mean of non-handicapped individuals. This indicates that the sample generally saw disabled individuals as different from and inferior to the non-disabled population.

TABLE 14

Mean ATDP Scores Before and After Program

Time of Measurement	GROUP					
	Experimental		Control		DR Accepted	
	(n=25)		(n=17)		(n=20)	
	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Before	82.80	33.56	75.58	31.93	70.0	27.14
After	77.39	30.87	72.41	25.38	77.60	25.07
Difference	- 4.81		-3.17		-7.6	

TABLE 15

ANOVA Summary Table: ATDP

Source	MS	df	F	P
Between Groups	521.12	2	.56	.58 n.s.
Error	934.02	59		
Time	.47	1	.001	.98 n.s.
Time x Groups	473.71	2	.59	.56 n.s.
Error	803.04	59		

The overall group comparisons conducted for these data indicated no significant differences. The next section examines the scores on each of the psychological measures in relation to the vocational objectives attained by the individuals in the sample. This last analysis was conducted to determine if there were any differential scores on the psychological measures that were correlated with the vocational outcomes and to determine how much of the total variance in vocational outcomes would be associated with the psychological measures.

III. Relationship of Vocational Outcomes to Psychological Measures.

For the first set of analyses, the criterion of employment success at the end of the study was used as the dependent variable. Three sets of independent variables were regressed against this criterion using a step-wise multiple method (Nie, *et al.*, 1975). For these analyses, all three groups were combined into employed and not employed categories. The first regression included pre-project measures on the psychological instruments; the second analysis included post-project measures on the same variables and the third analysis included the difference scores (between pre- and post-testing) as the independent variables.

The last two analyses (post-measures and difference scores) produced no significant relationships between any of the variables and the criterion of employment. Even the combination of all five measures in the regression formula failed to account for statistically significant variance in the criterion. The

combined post-measures accounted for only 10 percent of the total variance. ($p > .05$). It can therefore be concluded that no differences existed between the employed and the non-employed individuals across groups on the post-project measures.

The identical analysis conducted on the difference scores resulted in a similar outcome. None of the difference scores correlated significantly with the employment criterion. The combined independent variables accounted for only 17 percent of the total variance, again a non-significant relationship.

On the other hand, the pre-project measures did significantly correlate with the employment criterion. The results of this analysis are presented in Table 16. Twenty-four percent of the variance was accounted for by the combination of the following variables (in order of magnitude): 1) Attitudes Toward Disabled Persons, with higher scores correlating with greater success; 2) the number of scales elevated on the MMPI, with more scales elevated correlating with success; 3) judges' ratings of poorer adjustment correlating with success; 4) the Q-Sort correspondence (between ideal- and real-self), with lower degrees of correspondence being correlated with success. The major portion (23%) of the total variance was contributed by the first three variables.

TABLE 16:

Step-wise Multiple Regression of Pre-Project Measures on Subsequent Employment

STEP	VARIABLE	MULTIPLE CORRELATION (R)	R ²	R ² CHANGE WITH ADDITIONAL VARIABLE	SIMPLE R WITH CRITERION	F RATIO
1	ATDP	.333	.111	.111	(+) .333	4.50* df=1.36
2	*MMPI scales t scores $\geq$ 70	.426	.181	.070	(+) .310	3.88* df=2.35
3	MMPI judges' ratings	.484	.234	.053	(+) .197	3.47 df=3.34
4	Q-Sort (Z scores)	.489	.239*	.005	(-) .115	2.70* df=4.33

* Significant at $p < .05$.

These results are intriguing. While approximately half of the variance that can be attributed to these four variables is loaded in the first variable, ATDP, and is in the expected direction (with the more "positive" scores predictive of successful employment), the other half of the accounted-for variance is due to variables which relate to the criterion in an unexpected direction. It appears that, for our sample, more positive attitudes toward disabled people combine with relatively lower levels of psychological adjustment to pre-data (and somewhat predict) subsequent employment. Such a constellation of factors would be supportive of the notion that, for severely disabled individuals, gainful employment holds significant disincentives (in terms of loss of SSI benefits, Medi-Cal coverage, Homemaker Chore services, etc.) which are not often overcome when the individual is comfortable with himself and his life-situation. In our sample, those people who were relatively more accepting of disabled people and relatively less "comfortable" with themselves were more apt to become employed.

The second set of regression analyses were conducted on the group of experimental subjects only. The criterion of success established for these analyses was acceptance by the Department of Rehabilitation. This is an important criterion for consideration because it is well known that most people who are accepted for service by the Department eventuate in vocational education and training programs and subsequent employment.

Again, the separate independent variables were 1) all of the pre-project measures, 2) all of the post-project measures, and 3) the

difference scores between pre- and post-project.

In these analyses, neither the pre-project measures nor the difference scores were correlated with acceptance by the Department of Rehabilitation. In fact, only 18 percent of the variance could be attributed to pre-measures and only 15 percent of the variance by difference scores, even when all of the variables were combined.

On the other hand, a sizeable and statistically significant degree of relationship was found between several post-program scores and the criterion of acceptance.

The results of this multiple regression are presented in Table 17. In order of magnitude, the variables which emerged as significant were: 1) the number of MMPI scales elevated, with fewer elevations associated with acceptance. This variable accounted for 15 percent of the variance itself. 2) The ATDP score, with higher scores associated with acceptance; 3) the Q-Sort correspondence, with higher scores associated with acceptance, and 4) the measure of career satisfaction, with higher scores again associated with acceptance. The multiple correlation of these variables with the criterion of acceptance was .68 ($p < .05$). This means that about 46 percent of the variance in acceptance was associated with these factors.

TABLE 17:

Step-Wise Multiple Regression of Post-Project Scores on Acceptance for Services by the Department of Rehabilitation

STEP	VARIABLE	MULTIPLE CORRELATION (R)	R ²	R ² CHANGE WITH ADDITIONAL VARIABLE	SIMPLE R WITH CRITERION	F RATIO
1	# MMPI scales t scores $\geq$ 70	.394	.155	.155	(-) .394	3.30 df=1.18
2	ATDP	.518	.268	.113	(+) .173	3.11 df=2.17
3	Q-Sort (Z scores)	.592	.331	.083	(+) .299	2.88 df=3.16
4	Career Satisfaction	.679	.462*	.111	(+) .259	3.22* df=4.15

*Significant at $p < .05$

These results are supportive of the generally accepted belief that those people who exhibit relatively better psychological adjustment, more positive attitudes toward disabled people, and higher self-satisfaction will be accepted for services by the Department of Rehabilitation.

However, when the results of the two regression analyses are compared, an interesting issue is raised. In our sample, those variables (except for Attitudes Toward Disabled Persons) which are positively related to Department of Rehabilitation acceptance, are inversely related to gaining employment. The issue is more apparent than real, however. An inspection of the actual data (Table 18) indicates that those people for whom the pre-project scores were inversely related to employment made changes over time to become more like those people who were accepted for services by the Department of Rehabilitation, especially on the personal adjustment variables.

TABLE 18:

Mean Scores on the Psychological Battery For Each "Outcome" Group

VARIABLE	EMPLOYED (PRE-SCORES)	EMPLOYED (POST-SCORES)	DR ACCEPTED (POST-SCORES)	ORIGINALLY ACCEPTED (PRE-SCORES)	DR NOT ACCEPTED (POST-SCORES)
MMPI Judges' Ratings (Cumulative)	8.9	6.6	6.9	7.8	7.4
# of MMPI t scores $\geq$ 70	3.14	2.10	1.7	1.85	2.5
ATDP	79.9	66.0	75.0	68.7	71.4
Career Satisfaction	31.6	31.5	30.7	31.9	29.3
Q-Sort (Z Scores)	.681	.710	.802	.867	.648

Also, it can be seen that those people in the experimental group who were eventually accepted for services by the Department of Rehabilitation were more similar to those people who were originally accepted by the Department than were the subjects in the experimental group who were not accepted for services.

DISCUSSION

I. Vocational and Educational Outcomes

The major hypothesis of the study, which predicted that at least 10 percent of the sample would gain some degree of vocational/educational benefit, was supported. In this study, approximately 30 percent of the experimental subjects were enrolled in a vocational training or educational program by study's end and an additional ten percent were expected to make it to that point. Twenty percent of the sample had completed vocational education or training and nearly twenty percent had achieved an employed status by study's end. An additional 16 percent were reasonably expected to achieve an employed status sometime in the future after study's end. These results compared favorably to a group of individuals originally accepted by the Department of Rehabilitation. Since a high degree of selection has usually gone on in the Department of Rehabilitation (approximately 70 percent are not accepted for service), it would be expected that a higher percentage would achieve success in a vocational training program and that a greater number would become employed. This was observed in the study. While at study's end fewer individuals were employed in the originally accepted group (17%), more would be expected to be employed some time after study's end, based upon well established base-rates of employment success by individuals placed into training or education by the Department of Rehabilitation.

Surprisingly, the control group which received no systematic service had the highest percentage of individuals who achieved some degree of work success. However, this result has to be considered in light of qualitative differences in the nature, amount, and level of employment between the groups.

The non-served control group had the majority of individuals working part-time, some at as few as ten hours per week. There was no systematic follow-up of all individuals in this control group throughout the study (only at beginning and end), so it was difficult to determine the exact nature of any services they may have received. Most reported they obtained employment by themselves or by a friend and did not mention training or educational programs in which they may have participated.

These results have tremendous implications for service and for the use of vocational training and education programs when generalized to the full population of handicapped persons that are not served by the Department of Rehabilitation. By extrapolating the results of this small study to the current population of unserved persons, it was estimated that approximately 70,000 more people could be significantly benefited, 30,000 more people could become employed and 535,000 units of community college vocational education courses would be taken annually.

The services required to accomplish this objective are best described by inspection of Table 3. The results from this table indicate that individually-oriented vocational programs, focusing

on multiple factors that prevent employment would be needed. The services needed include personal counseling, family counseling, educational diagnostic evaluation and remediation, work exposure and work adjustment, realistic work experience and assistance with problems of independence, such as transportation and learning skills of independent living. These "pre-vocational" aspects must be met individually. It is doubtful that the "traditional" community college program could satisfy all of these needs unless it were flexible and creative in its use of resources. The more barriers to employment existing for a person, the more individually-tailored the vocational education program must be. Community colleges (and education in general) by tradition are oriented toward group needs and are geared to plan in terms of programs, classes and groups of occupations rather than in terms of the individual exception. In this study, it was found that people who benefited from service were engaged in relatively short-term vocational programs that combined counseling, work adjustment, work experience, remedial education and basic vocational education. Employment for the group of experimental subjects did not require long-term (two-year or four-year) programs. If an individual chooses to enroll in a long-term program it is one thing, but it may not be necessary to the attainment of entry-level employment. Moreover, many people capable of employment are incapable of long-term training programs because of a lack of ability to stay involved so long, personal or family responsibilities, recurring barriers (such as transportation

or health) or simply because they lack the desire to train for so long.

If community colleges were to help satisfy the needs outlined in this study, it would require that the system have the following characteristics:

1. Be open ended for enrollment, allowing individuals to enter and exit as they needed rather than by semesters.
2. Package training into modules aimed at helping people to learn specific vocational skills rather than a broad range of academic skills.
3. Supply heavy emphasis on realistic work experience, possibly using the campuses as work sites.
4. Provide for specialized counseling, possibly through a "home-room" kind of experience but not through segregation.
5. Combine resources with the Department of Rehabilitation and possibly the Employment Development Department.
6. Recognize the need for "pre-vocational" kinds of experiences for a large part of the disabled population and not to over-emphasize career education or placement too soon in the process.

The length of time needed to work successfully with the individuals in the group was approximately twice as long as the originally accepted group. This requires an investment of time and energy (and therefore fiscal expenditures). However, in terms of revenue generated, both directly (through income taxes) and indirectly

(through property taxes, reduced welfare, reduced medical costs of people who become employed), the long-term benefits outweigh the short-term costs.

II. Overall Differences Among the Groups on Psychological Measures

In summary, none of the overall comparisons among any of the groups on any of the psychological measures showed statistical significance. These measures included self-satisfaction, personal adjustment, career/vocational satisfaction and attitudes toward disabled persons.

These results indicate that there were no biases prior to the beginning of the study among the groups on the measures used and that no overall changes were noted as a result of time or the program.

The first result (of no differences at beginning) is as would be desired to insure no systematic bias in the selection of subjects. It also indicates that whatever biases are used to select people into the Department of Rehabilitation normally, are not clearly differentiated by these measures. There appeared to be a high degree of variability. It is still possible, however, that some selection based upon predicted success in the group can be distinguished. While no overall differences were observed, the successful individuals served in the experimental group appeared more like the DR accepted group than like their non-successful counterparts on measures of self-satisfaction, overall personal adjustment and attitude toward disability.

The results on the self-satisfaction measure indicate moderate levels of self-satisfaction (congruency) for the groups as a whole. Expressed as a degree of correlation between real self and desired self, the values obtained were largely in the .40 to .50 range. A perfect correlation (complete congruency) would mean a coefficient of 1.00. The level obtained is not unlike the level observed in individuals who are in counseling.

The personal adjustment results indicate that relative to the normal population, many clients (from all groups) expressed higher degrees of maladjustment. The overall average number of scales elevated on the MMPI for all groups was 2.1. The most frequently evaluated scales were those indicating somatic concern and depression. This is not unexpected considering that the groups were composed of disabled individuals from lower socio-economic levels and were not employed at the beginning of the study (c.f., Srole, 1965). The judges' ratings also reflect this. The average rating across all groups was about 2.5, which can be interpreted in relation to the original scale as reflecting a degree of adjustment somewhere between "moderate" degree of maladjustment and "mild" degree of maladjustment.

The career/vocational satisfaction scores indicate moderate degrees of satisfaction with career situations, even if there was no vocational involvement.

The attitude scale scores reflect an average indicating that the groups as a whole perceived the disabled as different from and somewhat inferior to the non-disabled population.

III. Relationships Between Psychological Measures and Vocational Education Outcomes.

The first set of regression analyses indicated that only pre-treatment measures were significantly correlated with ultimate employment by the time the study ended. Neither the post-treatment measures nor the difference scores approached a significant degree of correlation.

The employed persons, regardless of the group into which they fell (originally accepted, experimental or control) were similar in that they had higher scores on the ATDP scale, more elevations on the MMPI, were rated as relatively more poorly adjusted by expert judges and were somewhat less likely to view themselves as they desired to be. All in all, this pattern may represent a person who may be somewhat uncomfortable with himself, frustrated with his situation and, yet, upon inspection of post-scores (Table 18) better able to profit from the services given. Perhaps the lower degree of congruence as measured by the Q-Sort lends some degree of motivation to improve oneself; perhaps it represents some degree of dissatisfaction with current status.

Since most of the variance was not accounted for by these variables, even in combination, one should be careful not to screen individuals out of programs based upon these attributes. Instead, they are probably better used to determine which services a person is going to need and the length of time he may need to be in a pre-vocational program.

The second set of analyses revealed several variables that, when combined, correlated significantly and sizeably with acceptance by the Department of Rehabilitation. These variables combined to account for 46 percent of the variance. The person accepted was more likely to have better overall emotional adjustment, more positive attitudes toward disability, higher congruence between real-self and ideal-self and higher career satisfaction.

It tentatively appears that individuals who need pre-vocational services and who subsequently succeed (such as by being accepted by the Department of Rehabilitation) attain characteristics like people who are originally accepted by the Department and who are not rejected.

The pre-vocational experiences provided in this study appear to have supplied the necessary basic vocational preparation. Whatever the mechanisms involved, it appears that both a certain level of emotional adjustment, healthy attitude and self-concept and basic vocational preparation are needed to succeed in vocational education and training programs and that individuals who initially appear to be "not feasible" can profit from pre-vocational/pre-educational input.

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APPENDIX "A"



DEPARTMENT
OF
HEALTH SERVICES

COUNTY OF LOS ANGELES

RANCHO LOS AMIGOS HOSPITAL

7601 EAST IMPERIAL HIGHWAY
DOWNEY, CALIFORNIA 90242

November 13, 1974

EUGENE R. ERICKSON
ADMINISTRATOR

HAROLD MAZUR, M.D.
MEDICAL DIRECTOR

Dear

We are writing this letter in regards to a new research program which has started at Rancho Los Amigos Hospital's Vocational Services Department.

The new program involves maintaining a contact with many of the people who were once patients of Rancho Los Amigos. By doing this, we hope to be able to determine the needs of former patients and to develop better ways of serving people in the future. Your participation in this program will, I am sure, prove mutually beneficial to yourself and others seeking services at Rancho.

What we ask is that we be allowed to spend some time with you discussing your current activities and that you take a couple of questionnaires. Because of the importance of this program, the State of California has provided monies so that you will be paid for your participation. If you decide, however, that you do not wish to participate, it will in no way affect your continued care at Rancho.

We will be contacting you soon to see if we might be able to spend some time with you. If you prefer, you may contact us at 922-7711.

Sincerely,

Ronald L. Klein, Ph.D.

Ronald L. Klein, Ph.D.
Psychologist, Vocational Service

APPENDIX "B"



DEPARTMENT
OF
HEALTH SERVICES

COUNTY OF LOS ANGELES

RANCHO LOS AMIGOS HOSPITAL

7801 EAST IMPERIAL HIGHWAY

DOWNEY, CALIFORNIA 90242

February 28, 1975

EUGENE R. ERICKSON
ADMINISTRATOR

HAROLD MAZUR, M.D.
MEDICAL DIRECTOR

Dear

We are writing this letter in regards to a new program which has started at Rancho Los Amigos Hospital Vocational Services Department. This new program involves making contact with many people who have at one time applied to one of the State Department of Rehabilitation offices for vocational assistance but have not as yet become employed or involved in a vocational program.

Our program offers you the opportunity to become involved in Vocational Services. Some of these services available are: skill evaluation, counseling, educational evaluation and placement, work evaluation and preparation, on-the-job training, and Occupational Therapy.

We realize that transportation might be a problem which could prevent you from taking advantage of our programs. However, because of the importance of this program, the State of California has provided a limited amount of money enabling us to provide transportation under specific circumstances.

If you decide that you do not wish to participate in this program at this time it will not affect your receiving services at either the Department of Rehabilitation or Rancho Los Amigos Hospital in the future.

If you are interested in the possibility of receiving services through this program please contact us. Our phone number is (213) 922-7711.

Sincerely,

Ronald L. Klein, Ph.D.
Psychologist, Vocational Services

RLK:la



DEPARTMENT
OF
HEALTH SERVICES

COUNTY OF LOS ANGELES

RANCHO LOS AMIGOS HOSPITAL

7601 EAST IMPERIAL HIGHWAY
DOWNEY, CALIFORNIA 90242

EUGENE R. ERICKSON
ADMINISTRATOR

HAROLD MAZUR, M.D.
MEDICAL DIRECTOR

Dear

We are writing this letter in regards to a new research program which has started at Rancho Los Amigos Hospital's Vocational Services Department.

The new program involves establishing an additional association with many of the people who are presently in contact with a Department of Rehabilitation office. By doing this, we hope to be able to determine the needs of clients and to develop better ways of serving people in the future. Your participation in this program will, I am sure, prove mutually beneficial to yourself and others seeking services.

What we ask is that we be allowed to spend some time with you discussing your current activities and that you take a few questionnaires. If you decide, however, that you do not wish to participate, it will in no way affect your status with any State of County facility.

We will be contacting you soon to see if we might be able to spend some time with you. If you prefer, you may contact us at 922-7711.

Sincerely,

Ronald L. Klein, Ph.D.
Psychologist, Vocational Services

RLK:la

MINI-MULT

1. Do you have a good appetite?
2. Do you wake up fresh and rested most mornings?
3. Is your daily life full of things that keep you interested?
4. Do you work under a great deal of tension?
5. Once in a while, do you think of things too bad to talk about?
6. Are you troubled by constipation?
7. Have you, at times, very much wanted to leave home?
8. At times, do you have fits of laughing and crying that you cannot control?
9. Are you troubled by attacks of nausea and vomiting?
10. Does it seem that no one understands you?
11. At times, do you feel like swearing?
12. Do you have nightmares every few nights?
13. Do you find it hard to keep your mind on a task or job?
14. Have you had very peculiar and strange experiences?
15. Would you have been much more successful if people had not had it in for you?
16. During one period when you were a youngster, did you engage in petty thievery?
17. Have you had periods of days, weeks or months when you couldn't take care of things because you couldn't "get going"?
18. Is your sleep fitful and disturbed?
19. When you are with people are you bothered by hearing very queer things?
20. Are you liked by most people who know you?
- 21.. Have you often had to take orders from someone who did not know as much as you did?
22. Do you wish you could be as happy as others seem to be?
23. Do you think a great many people exaggerate their misfortunes to gain the sympathy and help of others?
24. Do you sometimes get angry?
25. Are you definitely lacking in self-confidence?

26. Are you troubled with your muscles twitching or jumping?
27. Much of the time, do you feel as if you have done something wrong or evil?
28. Are you happy most of the time?
29. Are some people so bossy that you feel like doing the opposite of what they request, even though you know they are right?
30. Are you being plotted against?
31. Will most people use somewhat unfair means to gain profit or advantage rather than lose it?
32. Do you have a great deal of stomach trouble?
33. Have you often been cross or grouchy without understanding why?
34. At times, have your thoughts raced ahead faster than you could speak them?
35. Is your home life as pleasant as that of most people you know?
36. Do you certainly feel useless at times?
37. During the past few years, have you been well most of the time?
38. Have you had periods in which you carried on activities without later knowing what you had been doing?
39. Do you feel that you have been punished without cause?
40. Have you ever felt better in your life than you do now?
41. Are you bothered by what others think of you?
42. Is your memory all right?
43. Do you find it hard to make talk when you meet new people?
44. Do you feel weak all over much of the time?
45. Are you troubled by headaches?
46. Have you had difficulty in keeping your balance in walking?
47. Do you like everyone you know?
48. Is anyone trying to steal your thoughts and ideas?
49. Do you wish you were not so shy?
50. Do you believe your sins are unpardonable?
51. Do you frequently find yourself worrying about something?
52. Have your parents often objected to the kind of people that you went around with?

53. Do you gossip a little at times?
54. Do you, at times, feel that you can make up your mind with unusually great ease?
55. Are you troubled by your heart pounding and by a shortness of breath?
56. Do you get mad easily and then get over it soon?
57. Do you have periods of such great restlessness that you cannot sit long in a chair?
58. Do your parents and family find more fault with you than they should?
59. Does anyone care much what happens to you?
60. Do you blame a person for taking advantage of someone who lays himself open to it?
61. Are you full of energy, at times?
62. Is your eyesight as good as it has been for years?
63. Do you often notice your ears ringing or buzzing?
64. Have you ever felt that someone was making you do things by hypnotizing you?
65. Have you had periods in which you felt unusually cheerful without any special reason?
66. Even when you are with people, do you feel lonely much of the time?
67. Do you think nearly anyone would tell a lie to keep out of trouble?
68. Are you more sensitive than most other people?
69. Does your mind seem to work more slowly than usual, at times?
70. Do people often dissappoint you?
71. Have you used alcohol excessively?

If #71 is answered yes, answer the following questions.

72. Have you ever felt "remorse" after drinking?
73. Has your work efficiency decreased because of drinking?
74. Is drinking harming your family in any way?
75. Have you less self-control because of drinking?
76. Do you get the inner shakes unless you continue to drink?

APPENDIX "E"

ATDP SCALE

READ EACH STATEMENT AND PUT AN "X" IN THE APPROPRIATE COLUMN ON THE ANSWER SHEET. DO NOT MAKE ANY MARKS ON THE QUESTION SHEETS.

PLEASE ANSWER EVERY QUESTION

1. Disabled persons are usually friendly.
2. People who are disabled should not have to pay income taxes.
3. Disabled people are no more emotional than other people.
4. Disabled persons can have a normal social life.
5. Most physically disabled persons have a chip on their shoulder.
6. Disabled workers can be as successful as other workers.
7. Very few disabled persons are ashamed of their disabilities.
8. Most people feel uncomfortable when they associate with disabled people.
9. Disabled people show less enthusiasm than non-disabled people.
10. Disabled people do not become upset any more easily than non-disabled people.
11. Disabled people are often less aggressive than normal people.
12. Most disabled persons get married and have children.
13. Most disabled persons do not worry any more than anyone else.
14. Employers should not be allowed to fire disabled employees.
15. Disabled people are not as happy as non-disabled ones.
16. Severely disabled people are harder to get along with than are those with minor disabilities.
17. Most disabled people expect special treatment.
18. Disabled persons should not expect to lead normal lives.
19. Most disabled people tend to get discouraged easily.
20. The worst thing that could happen to a person would be for him to be very severely injured.
21. Disabled children should not have to compete with non-disabled children.
22. Most disabled people do not feel sorry for themselves.

Appendix "E" con't.

23. Most disabled people prefer to work with other disabled people.
24. Most severely disabled persons are not as ambitious as other people.
25. Disabled persons are not as self-confident as physically normal persons.
26. Most disabled persons don't want more affection and praise than other people.
27. It would be best if a disabled person would marry another disabled person.
28. Most disabled people do not need special attention.
29. Disabled persons want sympathy more than other people.
30. Most physically disabled persons have different personalities than normal persons.

APPENDIX "F"

ITEMS IN Q-SORT QUESTIONNAIRE

<u>Card Number</u>	<u>Statement</u>
2	I put on a false front.
4	I make strong demands on myself.
5	I often kick myself for the things I do.
6	I often feel humiliated.
7	I doubt my sexual powers.
9	I have a warm emotional relationship with others.
11	I am responsible for my troubles.
12	I am a responsible person.
13	I have a feeling of hopelessness.
15	I can accept most social values and standards.
16	I have few values and standards of my own.
18	It is difficult to control my aggression.
19	Self-control is no problem to me.
22	I usually like people.
23	I express my emotions freely.
25	I want to give up trying to cope with the world.
26	I can usually live comfortably with the people around me.
27	My hardest battles are with myself.
28	I tend to be on my guard with people who are somewhat more friendly than I had expected.
29	I am optimistic.
32	I usually feel driven.
33	I am liked by most people who know me.
35	I am sexually attractive.

Appendix "F" con't.

<u>Card Number</u>	<u>Statement</u>
36	I feel helpless.
37	I can usually make up my mind and stick to it.
38	My decisions are not my own.
40	I am a hostile person.
41	I am contented.
42	I am disorganized.
43	I feel apathetic.
44	I am poised.
47	I am impulsive.
49	I don't trust my emotions.
50	It's pretty tough to be me.
51	I am a rational person.
52	I have the feeling that I am just not facing things.
53	I am tolerant.
54	I try not to think about my problems.
55	I have an attractive personality.
56	I am shy.
59	I am no one. Nothing seems to be me.
61	I am ambitious.
62	I despise myself.
63	I have initiative.
64	I shrink from facing a crisis or difficulty.
65	I just don't respect myself.
67	I take a positive attitude toward myself.

Appendix "F" con't.

<u>Card Number</u>	<u>Statement</u>
68	I am assertive.
69	I am afraid of a full-fledged disagreement with a person.
70	I can't seem to make up my mind one way or the other.
71	I am confused.
72	I am satisfied with myself.
73	I am a failure.
74	I am likable.
75	My personality is attractive to the opposite sex.
76	I am afraid of sex.
77	I have a horror of failing in anything I want to accomplish.
78	I am relaxed, and nothing really bothers me.
79	I am a hard worker.
80	I feel emotionally mature.
83	I really am disturbed.
84	All you have to do is just insist with me, and I give in.
85	I have to protect myself with excuses, with rationalizing.
86	I feel insecure within myself.
88	I am intelligent.
90	I feel hopeless.
91	I am self-reliant.
94	I am different from others.
95	I am unreliable.
96	I understand myself.
97	I am a good mixer.
98	I feel adequate.
99	I am worthless.
100	I dislike my own sexuality.

APPENDIX "G"

CAREER SATISFACTION

1. Choose the one of the following statements which best tells how well you like your vocational status (career satisfaction).

Place a check mark (✓) in front of that statement:

- _____ I hate it.
- _____ I dislike it.
- _____ I don't like it.
- _____ I am indifferent to it.
- _____ I like it.
- _____ I am enthusiastic about it.
- _____ I love it.

2. Check one of the following to show how much of the time you feel satisfied with your vocational status (career satisfaction).

- _____ All of the time.
- _____ Most of the time.
- _____ A good deal of the time.
- _____ About half of the time.
- _____ Occasionally.
- _____ Seldom.
- _____ Never.

3. Check the one of the following which best tells how you feel about changing your vocational status (career satisfaction).

- _____ I would change my vocational status at once if I could.
- _____ I would take almost any job in which I could earn as much or more than I am now earning.
- _____ I would like to change both my vocational status (or job) and my vocational goals (or occupation).
- _____ I am not eager to change my vocational status.

Appendix "G" con't.

- _____ I cannot think of any vocation which I would enjoy (or exchange mine for).
- _____ I would not exchange my vocational status for any other at this time.
- _____ I cannot see myself wanting to change my vocational status (or job) in the future.

4. Check one of the following to show how you think you compare with other people.

- _____ No one likes his vocational status better than I like mine.
- _____ I like my vocational status much better than most people like theirs.
- _____ I like my vocational status better than most people like theirs.
- _____ I like my vocational status about as well as most people like theirs.
- _____ I dislike my vocational status more than most people dislike theirs.
- _____ I dislike my vocational status much more than most people dislike theirs.
- _____ No one dislikes his vocational status more than I dislike mine.

Some jobs (vocations) are more interesting and satisfying than others. We want to know how people feel about different jobs (vocations). This blank contains eighteen statements about jobs (vocations). You are to cross out the phrase below each statement that best describes how you feel about your present vocational status. There are no right or wrong answers. We should like your honest opinion on each one of the statements.

1. I am satisfied with my vocational status for the time being.
- Strongly agree Agree Undecided Disagree Strongly disagree
2. I feel fairly well satisfied with my present vocational status.
- Strongly agree Agree Undecided Disagree Strongly disagree
3. I like my vocational status better than the average person does.
- Strongly agree Agree Undecided Disagree Strongly disagree

Appendix "G" con't.

4. There are some conditions concerning my vocational status that could be improved.

Strongly agree Agree Undecided Disagree Strongly disagree

5. I consider my vocational status rather unpleasant.

Strongly agree Agree Undecided Disagree Strongly disagree

6. I definitely dislike my vocational status.

Strongly agree Agree Undecided Disagree Strongly disagree

APPENDIX "H"

WORK AND ACTIVITY ASSESMENT QUESTIONNAIRE

(1) Were you working five months ago?

(2) Have you been working during the last five months?

(3) Are you working now?

If yes: at what?

(4) Were you going to school or involved in any type of training program five months ago?

(5) Are you going to school or involved in any type of training program now?

If yes: What kind of program are you involved in?

When will you finish?

How are you doing?

(6) Were you happy five months ago? yes no

(7) Are you happy now? yes no

Compared to five months ago how happy are you now?

1	2	3	4	5
less	same	a little	more	a lot
happy		more	happy	more

(8) Were you satisfied with your life five monts ago? yes no

(9) Are you satisfied with your life now? yes no

Compared to five months ago how satisfied are you now with your life?

1	2	3	4	5
less	same	a little	more	a lot
satisfied		more	satisfied	more

Appendix "H" con't .

ACTIVITIES

- (1) Find out the amount of time spent in a day :

working

eating

sleeping.

- (2) Subtract this time from 24 hours and multiply by 7

- (3) Estimate the amount of these hours you spend doing the following?

	5 months ago	now	ideally
church			
clubs			
organizations			
volunteer organizations			
reading			
outdoor activities			
television			
cards			
friends			
crafts			
doing nothing			
other kinds of activities (list)			